

Department: Botany and Microbiology
Year: 2015/2016
Section: Botany/chemistry
Course Title and Code: Flora and Phytogeography N408
Term: Spring
Date: 5/6/2016
Time Allowed: 1 Hours
Total points: 60
Professor Name: Dr. Kholod A. Khattab



Damanhour University
Faculty of Sciences

Answer the Following Questions:

Q1) A. Compare between each of two of the following: (20 points)

1. Flora and Vegetation.
2. Vernacular name and Scientific name.
3. Hybrids and Cultivars.

B. Define the following terms: (5 points)

1. Phytogeography.
2. Speciation.

Q2) Briefly discuss each of the following topics: (35 points)

1. Factors Governed the Geographical Distribution of Plants.
2. Importance of Studying Flora.
3. Geographical Distribution of Plants as Taxonomic Units.

With my best wishes



Department: Botany
Year: 2nd level
Section: bot//chem
Course Code: Bot 232
Course Title: Economic botany
Term: Second, 2015/2016
Date: / /2016
Time Allowed: 1 hours
Total points: 60



Professor(s) Name(s): Dr. Ahmed A. Khalafallah

Answer the following Questions

Question 1:

(10 marks)

In Points, what are the nutritional values of (4 only):

- a- Rice b- Vegetables c- Spices d- Chickpea e- Soft beverages

Question 2:

(10 mark)

Briefly discuss the economic values of (two only):

- a- Legumes b- Maize c- Fruits

Question 3:

(10 mark)

Compare between fruits of tropical and temporal regions.

Question 4:

(10 mark)

Classify the spices according to the used part and give examples

Question 5:

(15 mark)

Transfer the table in your answer sheet and complete the clear cells by suitable words

Plant species	Used part	Active substances	Medicinal effects
<i>Nigela sativa</i>			
<i>Cominum cominum</i>			
<i>Origanum majorana</i>			
<i>Caron carv</i>			
<i>Triginella foenum graecum</i>			

Question5:

(5 marks)

Mention five advices to users of herbs in beverages and medicine

My best wishes
Dr/ Ahmed A. Khalafallah
Assist. Prof. of plant Ecology – Ain Shams University



ملحوظة: الامتحان ثلاثه اسئله في ورقتين و الإجابة في نفس الورقة الإمتحانية

Question (1) (10 marks)

1.A- Put (v) or (X)

- 1- Some yeasts are prokaryotes.
- 2- We can using existing genetic variation to isolate yeasts with desirable phenotypes.
- 3- Some yeasts belonging to ascomycetes and others to basidiomycetes.
- 4- Acidiphilic yeast can keep its internal pH close to neutral.
- 5- The membrane lipid of the thermophilic yeasts is distinguished by the high percentage of saturated fatty acid.
- 6- Xerophilic yeasts produce mainly glycerol as a compatible solute.
- 7- To increase the accumulation of glycerol by yeast, high glucose concentration is needed.
- 8- Phenotypic characters is sufficient for complete identification of yeast.
- 9- A high proportion of melanin-producing yeasts are known to be associated with environmentally stressed areas such as hot and cold deserts.
- 10- The water activity is low is in cold as well as hypersaline environments.

Question 2 (30 marks) write short notes in:

Osmophilic Yeasts	
Role of yeast in Xenobiotic Environments	

Department: Botany
Year: 2015/2016
Section: Biology
Course Code: Bot 302
Course Title: Plant Taxonomy
Term: Spring 2016
Date: 28/5/2016
Time Allowed: 2 hours
Total points: 60
Professor Name: Dr. Atia Eisa



Q1- Define the following taxonomic terms: -

(30 points: 2 each)

- 1- Plant Identification
- 2- Epipetalous
- 3- Hypogenous flower
- 4- Bifacial leaf
- 5- Polygamous species
- 6- Placenta
- 7- Determinate inflorescence
- 8- Septifragal capsule
- 9- Biennial species
- 10- Acaulescent stem
- 11- Haustorial root
- 12- Actinomorphic flower
- 13- Dioecious species
- 14- Sporopollenin
- 15- Spadix

Q2- Explain the following floral formula in a few word

(5 points)

- 1- $\ast$, -5-, 8, 4, Samara
- 2- (x), 5, 5, 10, 3, Achene

Department: Botany
Year: 2015/2016
Section: Biology
Course Code: Bot 302
Course Title: Plant Taxonomy
Term: Spring 2016
Date: 28/5/2016
Time Allowed: 2 hours
Total points: 60
Professor Name: Dr. Atia Eisa



Q3- List with a few details the terrestrial adaptations that distinguish land plants from Charophycean algae (5 points)

Q4- Select a representative family for Monocot, Rosids and Asterids groups and write the taxonomic characteristics and economic importance for each group. (15 points: 5 each)

Q5- Draw a typical flower and label all the parts, including collective terms (5 points)

Best wishes



Damanhour University
Faculty of Science
Botany Department
Second Term Examination



Year:	Third – level	Course Title:	Algal biotechnology
Section:	Botany /Chemistry	Course Code:	N 304
Date:	6 /6/2016	Total points:	60 Marks
Examiner:	Prof. Dr. Wael M. Ibrahim	Time Allowed:	2 hours

Answer the following questions

Question 1: Write short notes on the following: (5 marks/point)

- Mechanism of tolerance in algae to heavy metals
- Using of Seaweeds in agriculture
- PH as a main factor affecting removal of heavy metals

Question 2: Mark correct (✓) or wrong (X) of the following: (1.5 marks/point)

- Flotation methods take place by injection of water to algal culture.
- Water loss is the major advantage of open ponds system.
- In Photo Bio-Reactors, the algal mixture passes through a degassing zone.
- During harvesting, Ultrasound waves are causing the algal cells to aggregates.
- Algal photosynthesis and bacterial decomposition is principal mechanism of Facultative ponds.

Question 3: Illustrate the following by drawing only: (5 marks/point)

- The mechanism of nitrogen fixation.
- Algal columns used for removing of heavy metals.

Question 4: Compare without drawing between the following: (5 marks/point)

- Tubular and Plate photobioreactors.
- Ability of *Oscillatoria* and *Chlorella* to remove heavy metals

Question 5: Choose the correct answer: (2 marks/point)

- Bacteria that promoting algal growth are capable of releasing some..... materials
1- toxic 2- nontoxic 3- beneficial 4- harmful
- In WSPs, the maturation ponds with depth of
1- 0.5 to 1 m 2- 1 to 3 m 3- 2 to 4 m 4- 4 to 5 m
- Negative charges on surfaces of algae are disrupted by
1- Filtration 2- Flocculation 3- Flotation 4- Centrifugation
- When algal dosage increased, the adsorption of heavy metals is.....
1- declined 2- decreased 3- not affected 4- increased
- Most algae are able to grow at temperature between
1- 5-10°C 2- 10-20°C 3- 15- 25°C 4- 25-35°C
- Algae contain which combines with iron to form soluble complexes.
1- chlorophyll a 2- chlorophyll b 3- vitamin c 4- phycocyanin
- Thin media with low hydrodynamic pressure take place in photobioreactor
1- Vertical 2- Horizontal 3- Tubular 4- Plate
- Algae promote satiety because they contain a high amount of.....
1- chlorophyll 2- alginate 3- vitamins 4- phycocyanin

Best Wishes

Department: Botany and Microbiology
Year: 2015/2016
Section: Botany/chemistry and Free Electives
Course Title and Code: Soil N331
Term: Spring
Date: 13/6/2016
Time Allowed: 1 Hours
Total points: 60
Professor Name: Dr. Kholod A. Khattab



Damanhour University
Faculty of Sciences

Answer the Following Questions:

Q1) A. Make only a labeled diagram for each of the following: (15 points)

1. Soil Composition.

Choice only 2 points

2. Soil Structural Categories.

3. Soil Profile and its Subdivision into Soil Horizons.

B. Compare between each of two of the following: (15 points)

1. Infiltration and Percolation.

2. Field Capacity and Wilting Point.

Q2) A. Briefly discuss each of the following topics: (30 points)

1. Different Types of Soil Water.

Choice only 3 points

2. Importance of Humus to increase soil fertility.

3. Soil Pedogenesis Factors.

4. Forces which Contribute to the Energy State of Soil Water.

With my best wishes



Department: Botany
 Year: Second/ third/ fourth
 Section: Bot./Chem./Z./Chem.
 Course code: **Bot. 226**
 Course Title: **PRINCIPLES OF GENETICS**
 Term: Second, 2014/2015
 Date: Sat., 7/6/2015
 Time Allowed: 1 hours
 Total points: 60
 Professors Name: **DR. MONA H. M. EL-HADARY**



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Answer Sheet											
Q2: Complete											
1					3						
2					4						
Q3: Multiple Choices											
يتم تظليل الدائرة بالكامل وتسويدها بالقلم الحبر- وتظليل أكثر من اختيار يلغى الإجابة											
1	☐ A	☐ B	☐ C	☐ D	☐ E	12	☐ A	☐ B	☐ C	☐ D	☐ E
2	☐ A	☐ B	☐ C	☐ D	☐ E	13	☐ A	☐ B	☐ C	☐ D	☐ E
3	☐ A	☐ B	☐ C	☐ D	☐ E	14	☐ A	☐ B	☐ C	☐ D	☐ E
4	☐ A	☐ B	☐ C	☐ D	☐ E	15	☐ A	☐ B	☐ C	☐ D	☐ E
5	☐ A	☐ B	☐ C	☐ D	☐ E	16	☐ A	☐ B	☐ C	☐ D	☐ E
6	☐ A	☐ B	☐ C	☐ D	☐ E	17	☐ A	☐ B	☐ C	☐ D	☐ E
7	☐ A	☐ B	☐ C	☐ D	☐ E	18	☐ A	☐ B	☐ C	☐ D	☐ E
8	☐ A	☐ B	☐ C	☐ D	☐ E	19	☐ A	☐ B	☐ C	☐ D	☐ E
9						20					
10	☐ A	☐ B	☐ C	☐ D	☐ E	21	☐ A	☐ B	☐ C	☐ D	☐ E
	☐ A	☐ B	☐ C	☐ D	☐ E		☐ A	☐ B	☐ C	☐ D	☐ E
11	☐ A	☐ B	☐ C	☐ D	☐ E	22	☐ A	☐ B	☐ C	☐ D	☐ E

With My Best Wishes

Dr. Mona El-Haday

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Year: Second/ third/ fourth
Section: Bot./Chem./Z./Chem.
Course code: Bot. 226
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Q1: Define: (10 Marks)

(Knowledge & Understanding Evaluation)

- a- Dihybrid cross -----

- b- Gene frequency-dependent selection-----

- c- Gene Pool-----

Q2: Complete missing parts in the following statements: (4 Marks).....Sheet Answer

(Professional, Practical and Transferable Skills)

- When the dominant genes enter the gametes in G1 in contrast to their parental combination, they resulted in what is known as(1).....phase.
- Laws of Mandel assumes that genes of two traits enter gametes(2).....
- Coincidence coefficient is refers to situation of(3)..... in the neighboring region.
- .- New recombinations are a result for a phenomenon called...(4).....that means

Q3: Multiple Choices: (44 Marks)Sheet Answer

(More than one skill Evaluation)

1- Cri-du-chat Syndrome resulted from change in chromosome:

- (a) 21-structure (b) 5-structure (c) 7-structure (d) 5-duplication (e) all

2- In partial dominance the resulted second filial generation has the ratio of :

- (a) 9:7 (b) 3:1, (c) 9:3:3:1 (d) 1:2:1, (e) 2:1

3- Turner Syndrome results from change in chromosome number by:

- (a) deletion of x-chromosome (b) Trisomy (c) Extra sex chromosome
(d) deletion of Y-chromosome (e) deletion of an autosome

4- Repressor protein inhibits transcription of lac. Operon by binding with:

- (a) terminator (b) DNA polymerase (c) promotor (d) operator (e) cAMP.

With My Best Wishes

Dr. Mona El-Haday

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5-Genotype of individuals in case of repulsion assortment of genes is no:

- (a) sR/SR (b) Sr/Sr (c) sR/sR (d) SR/SR, (e) one of all preceding forms.

6- Genotype of individuals in case of coupling assortment of genes is no:

- (a) Tf/Tf (b) FT/FT, (c) FT/ft, (d) ft/ft (e) one of all preceding forms.

7- Alternate forms of a gene are known as:

- (a) polyploids (b) tautomers, (c) isomers, (d) alleles, (e) aneuploids,

8- Genetic distance that between the two genes SR is 6, ST is 10 and RT is 4, so these genes assortment occurs as:

- (a) STR (b) RTS (c) SRT (d) RST (e) all the preceding.

9- Edward Syndrome resulted from:

- (a) an autosome deletion (b) Trisomy of 21.
(c) Trisomy of 18 (d) Trisomy of 13 (e) Trisomy of 5

10- Klinefelter's has the form of:

- a) 44+XXXY (b) XXXX (c) XYYY (d) all the preceding (e) No one

11- Silent mutation may be resulted if it occurred in any of the following region except:

- (a) Non coding region (b) active sites of enzymes (c) intergenic
(d) introns (e) a synonymous amino acid

12- Free assortment of two traits is governed by the ratio of:

- (a) 2:1 (b) 9:7 (c) 3:1 (d) 9:3:3:1 (e) 1:2:1

13- Repressor protein cause gene switch off if there is:

- (a) low glucose and high lactose (b) both low glucose and lactose
(c) both high glucose and lactose (d) high glucose and low lactose (e) b and d

14-Product of lac operon is transcribed from transcriptional unit that is known:

- (a) polymeric (b) polyclonal (c) polycistronic (d) multimeric (e) polysomal

15- cAMP binds to CAP if there is:

- (a) low glucose and high lactose (b) both low glucose and lactose
(c) both high glucose and lactose (d) a and c (e) a and b

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- 16-Feathers with Short, straight, circular end-shaped in females Leghorn are produced in case genotype case of: (a) hh, (b) HH, (c) Hh, (d) all preceding forms. (e) no one
- 17- The closely linked genes have assortment of FTY, so the predicted genetic distance between them may be that has no: (a) FY=30 and TY=15 (b) FT = 15 and FY=15 (c) FY= 30 and FT= 15 (d)TY=15 and FT=15 (e)one of all forms.
- 18- In Lac operon, the gene is switched on when repressor is chelated by: (a) glucose (b) cAMP (c) CAP (d) allolactose (e) lactose
- 19- Down is chromosomal aberration resulted from change in the chromosome structure number: (a) 5 number (b) 21 structure. (c) 21 number (d) 5 structure. (e) no one.
- 20-The cell organelle that does not contain genetic material is: (a) Chloroplast (b)Nuclous (c) Gologi (d) Mitochondria (e) no one
- 21- Pattern baldness in human females is resulted only in case of genotype: (a) Bb (b) bb, (c) BB (d) Bb (e) all preceding forms.
- 22- If both glucose and lactose are absent, the structural gene will: (a) produce high level of lactose (b) be switched off (c) be switched on (d) be positively controlled (e) produce basal level of lactase

Q4: Solve the problem: (6 Scores)

(Professional and Practical Skills Evaluation)

In a farm in Nobaria, The yellow color is dominant in cows and represented as "Y" while white color is represented by yy. If the no. of the population equal 2700 sheep; 2673 are white and 27 are black. Calculate the gene frequency for both genes.